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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/786,539	02/26/2004	Osamu Komazawa	000409-094	3250

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EXAMINER	
CHANG, CHING	
ART UNIT	**PAPER NUMBER**
3748	

DATE MAILED: 12/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/786,539	KOMAZAWA ET AL.	
	Examiner	Art Unit	
	Ching Chang	3748	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-15 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

7)☒ Claim(s) 5,7-9,12 and 13 is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 10/05/2004.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claims 1-15 are objected to because of the following informalities:

- " a plurality of said rotational phase restriction mechanisms " appears to be -- a plurality of rotational phase restriction mechanisms – in claim 1.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. ***Claims 1-4, 6, 10-11, and 14-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Nakayoshi (US Patent 6,058,897).***

Nakayoshi discloses a variable valve timing control device comprising: a driving side rotational member (30) rotating synchronized with a crankshaft (54); a driven side rotational member (20) positioned coaxially with the driving side rotational member, the driven side rotational member rotating with a camshaft (10); a rotational phase holding mechanism (80, 90) for holding a relative rotational phase between the driving side

rotational member and the driven side rotational member at a locked phase; a rotational phase restriction mechanism (80, 90) for allowing a relative rotation that the relative rotational phase approximate to the locked phase and for restricting the relative rotation that the relative rotational phase being separated from the locked phase; a groove (24, 33, 27a-27c) formed at one of the driving side rotational member and the driven side rotational member; a restriction body (81, 91) provided at the rotational phase restriction mechanism for restricting the relative rotation by moving from the other of the driving side rotational member and the driven side rotational member to be received at the groove; a plurality of rotational phase restriction mechanisms (80, 90) for restricting the relative rotation in a predetermined direction at different relative rotational phases; a step portion (of 24, 36, and 27a-27c) provided at the groove serving as a part of at least one of the rotational phase restriction mechanisms being engaged with the restriction body for restricting the relative rotation in the predetermined direction; and the rotational phase restriction mechanism including the step portion for restricting the relative rotation in the predetermined direction at the plural relative rotational phases (See Col. 3, line 47 through Col. 7, line 43); wherein the rotational phase holding mechanism includes the plural rotational phase restriction mechanisms; wherein the groove is formed at said the other of the driving side rotational member and the driven side rotational member in a radial direction so that the restriction body moves in the radial direction to be received at the groove (See Figs. 1-3); wherein the relative rotational restriction is applied in order by the different rotational phase restriction mechanisms for stepwise restricting the relative rotation in the predetermined direction at the plural different relative rotational

phases; the rotational phase restriction mechanism for applying the stepwise restriction at different relative rotational phases in the same direction; wherein the rotational phase restriction mechanism applies the stepwise restriction at the different relative rotational phases in accordance with a rotation of the camshaft; wherein the step portion is configured stepwise; wherein each rotational phase restriction mechanism includes the step portion (See Figs. 1-3); wherein the plural relative rotational phases determined by restricting the relative rotation includes varied rotational phase differences different from one another; wherein the rotational phase difference is varied from a small phase difference at an initial state to be increased in order.

Allowable Subject Matter

4. Claims 5, 7-9, and 12-13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Komazawa et al. (US Patent 6,684,835).
- Lewis (US Patent 6,647,936).

- Takenaka et al. (US Patent 6,779,499).
- Hase (US Patent 6,523,511).

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ching Chang whose telephone number is (571)272-4857. The examiner can normally be reached on M-Th, 7:00 AM -5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Denion can be reached on (571)272-4859. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Patent Examiner

Ching Chang

Thomas Denion
THOMAS DENION
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700